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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,189	12/07/2000	Robert Miller	IBM/151	1431

26517 7590 07/23/2004

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EXAMINER	
EL CHANTI, HUSSEIN A	

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/732,189	MILLER, ROBERT	
	Examiner	Art Unit	
	Hussein A El-chanti	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/04,4/04,6/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

1. This action is responsive to amendment received on June 15, 2004.. Claims 1-26 are pending examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-14, 22, 23 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Hamilton et al., U.S. Patent No. 6,392,993 (referred to hereafter as Hamilton).

As to claim 1, Hamilton teaches a method of determining a status of a peer protocol initiated on a plurality of members of a group in a clustered computer system, the method comprising:

(a) locally tracking protocol progress information within each member of the group (see col. 3 lines 20-41 and col. 4 lines 3-8); and

(b) responding to a query directed to a selected member of the group by providing the protocol progress information locally tracked by the selected member (see col. 4 lines 9-17).

As to claim 2, Hamilton teaches the method of claim 1, wherein locally tracking protocol progress information includes tracking, within a first member of the group, acknowledgment (ACK) messages directed to the first member by each other member of the group (see col. 4 lines 3-8).

As to claim 3, Hamilton teaches the method of claim 1, wherein locally tracking protocol progress information includes:

(a) tracking, within a first member of the group, a current acknowledgment (ACK) round for the first member, the current ACK round associated with a current peer protocol being processed by the first member (see col. 3 lines 34-42); and

(b) tracking, within the first member, a last ACK round received parameter associated with each other member of the group, the last ACK round received parameter for each other member identifying a peer protocol associated with a last received ACK message from such other member (see col. 3 lines 34-42 and col. 27 lines 1-22).

As to claim 4, Hamilton teaches the method of claim 3, wherein locally tracking protocol progress information further includes updating the current ACK round for the first member in response to receipt of ACK messages for the current peer protocol from all other members of the group (see col. 27 lines 1-22 and col. 28 lines 19-32).

As to claim 5, Hamilton teaches the method of claim 1, wherein locally tracking protocol progress information includes updating the protocol progress information for a first member of the group in response to receipt of an acknowledgment (ACK) message directed to the first member (see col. 27 lines 1-22).

As to claim 6, Hamilton teaches the method of claim 1, further comprising:

(a) waiting on a resource required by a protocol being processed on the selected member and

(b) monitoring for receipt of the query by the selected member while waiting on the resource (see col. 28 lines 33-49).

As to claim 7, Hamilton teaches the method of claim 6, wherein the protocol is a peer protocol, and wherein waiting on the resource includes waiting for receipt of an acknowledgment (ACK) message directed to the selected member (see col. 7 lines 53-col. 8 lines 3 and col. 6 lines 49-60).

As to claim 8, Hamilton teaches the method of claim 6, wherein the protocol is a local protocol, and wherein waiting on the resource includes waiting on a local resource requested by the selected member (see col. 28 lines 33-49).

As to claim 9, Hamilton teaches the method of claim 8, wherein the local resource is selected from the group consisting of a lock and a creation of a new job (see col. 27 lines 1-21).

As to claim 10, Hamilton teaches the method of claim 6, wherein waiting on the resource includes waiting for receipt of a message by a local message queue for the selected member, and wherein monitoring for receipt of the query includes monitoring the local message queue for receipt of a query message (see col. 28 lines 33-49).

As to claim 11, Hamilton teaches the method of claim 1, wherein locally tracking protocol progress information within each member of the group includes locally tracking

within the selected member protocol progress information associated with at least one other member in the group (see col. 27 lines 1-22 and col. 28 lines 19-32).

As to claim 12, Hamilton teaches the method of claim 1, wherein locally tracking protocol progress information within each member of the group includes locally tracking within the selected member protocol progress information associated with all other members in the group (see col. 27 lines 1-22 and col. 28 lines 19-32).

As to claim 13, Hamilton teaches the method of claim 1, wherein locally tracking protocol progress information within each member of the group includes locally tracking within each member protocol progress information associated with each other member in the group (see col. 27 lines 1-22 and col. 28 lines 19-32).

As to claim 14, Hamilton teaches an apparatus, comprising:

(a) a memory (see col. 6 lines 1-20); and

(b) a program resident in the memory, the program configured to determine a status of a peer protocol initiated on a plurality of members of a group in a clustered computer system by locally tracking protocol progress information within at least one member of the group, and providing the protocol progress information locally tracked by a member of the group in response to a query directed to such member (see col. 3 lines 20-41 and col. 4 lines 3-17).

As to claim 22, Hamilton teaches a clustered computer system, comprising:

(a) a plurality of nodes coupled to one another over a network (see fig. 10 and its corresponding illustration);

(b) a plurality of member jobs defining a group and configured to be executed by at least one of the plurality of nodes (see fig. 10 and its corresponding illustration); and

(c) a program configured to be executed by at least one of the plurality of nodes to determine a status of a peer protocol initiated on the plurality of members by locally tracking protocol progress information within at least one member of the group, and providing the protocol progress information locally tracked by a member of the group in response to a query directed to such member (see col. 3 lines 20-41 and col. 4 lines 3-17).

As to claim 23, Hamilton teaches a program product, comprising:

(a) a program configured to determine a status of a peer protocol initiated on a plurality of members of a group in a clustered computer system by locally tracking protocol progress information within at least one member of the group, and providing the protocol progress information locally tracked by a member of the group in response to a query directed to such member (see col. 3 lines 20-41 and col. 4 lines 3-17); and

(b) a signal bearing medium bearing the program (see col. 3 lines 20-41 and col. 4 lines 3-17).

As to claim 24, Hamilton teaches the program product of claim 23, wherein the signal bearing medium includes at least one of a recordable medium and a transmission medium (see col. 6 lines 1-30).

As to claim 25, Hamilton teaches an apparatus, comprising:

(a) a memory (see col. 6 lines 1-20); and

(b) a program, resident in the memory, the program configured to monitor for receipt of a query message by a member of a group in a clustered computer system while a current protocol for the member is waiting on a resource, the program further configured to output protocol status information in response to receipt of the query message (see col. 3 lines 20-41 and col. 4 lines 3-17).

As to claim 26, Hamilton teaches the apparatus of claim 25, wherein the resource is selected from the group consisting of a local resource and an acknowledgment (ACK) message (see col. 3 lines 20-41 and col. 4 lines 3-17).

3. Claims 15-21 do not teach or define any additional limitation over claims 1-14 and therefore are rejected for similar reasons.

4. Applicant's arguments filed have been fully considered but they are not persuasive.

In the remarks, the applicant argues in substance that; A) Hamilton does not disclose a peer protocol B) Hamilton does not disclose locally tracking the protocol progress information by each member of the group C) Hamilton does not disclose a group or cluster.

In response to A) Hamilton teaches a method of sending acknowledgements and negative acknowledgments to a sender by a plurality of clients. The clients communicate with the sender using a protocol based on UDP protocol (see col. 3). There is no limitation on the type of peer protocol used in the communication method and therefore Hamilton's UDP based protocol meets the scope of the claimed limitation peer protocol".

In response to B) Hamilton teaches a method of sending acknowledgements and negative acknowledgments to a sender by a plurality of clients. Each client keeps a list of the received packages. The client sends an acknowledgement for every Nth packet received by the client from the sender. The client receives a package and sends an acknowledgement for the received package. The client then starts a timer to count to a predetermined time for the Nth packet to be received by the client. If the timer expires and the Nth packet was not received by the client, the client sends a negative acknowledgement to the sender (see col. 23-col. 24). The client tracks the protocol progress information using the table and the timer. There is no limitation on how the client tracks the protocol progress and therefore Hamilton meets the scope of the claimed limitation "locally tracking the protocol progress information".

In response to C) Fig. 2 shows a plurality of clients communicating with a plurality of servers where each client tracks the progress of transferred packets. There is no limitation on how the groups are arranged and therefore Hamilton meets the scope of the claimed limitation "group".

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein A El-chanti whose telephone number is (703)305-4652. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (703)308-7562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hussein El-chanti

July 15, 2004

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